

**COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Southwest Regional Office**

STATEMENT OF LEGAL AND FACTUAL BASIS

Appalachian Plastics, Inc.
34001 Glove Drive, Glade Spring, Virginia
Permit No. SWRO11074

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Appalachian Plastics, Inc. has applied for renewal of the Title V Operating Permit for its facility in Glade Spring, Virginia. The Department has reviewed the application and has prepared a Title V Operating Permit.

Engineer/Permit Contact:

Date: December 21, 2007

Air Permit Manager:

Date: December 21, 2007

Deputy Regional Director:

Date: December 21, 2007

FACILITY INFORMATION

Permittee

Appalachian Plastics, Inc.
P. O. Box 1044
Glade Spring, Virginia 24340

Facility

Appalachian Plastics, Inc.
34001 Glove Drive
Glade Spring, Virginia 24340

County-Plant Identification Number: 51-191-00140

SOURCE DESCRIPTION

SIC Code: 3089 – Manufacture of plastic products, not elsewhere classified.

Appalachian Plastics, Inc. manufactures fiberglass reinforced plastic products consisting of duct systems, tanks, water playground equipment and various other custom parts. The company utilizes several different processes to coat glass fibers with a resin mix depending on the type of product being produced. These processes include filament winding, pressure fed rolling, flow coating (flow chipping), Instant Start Device (ISD) chopping, impinged nozzle chopping, hand lay-up; spray-applied gelcoat and hand applied gelcoat. Volatile Organic Compound (VOC) and Hazardous Air Pollutant (HAP) emissions from each process occur during resin mixing, resin application and resin curing stages common to each process.

The facility is a Title V major source of VOC and HAP. This source is located in an attainment area for all pollutants, and is a Prevention of Significant Deterioration (PSD) minor source. The facility is currently permitted under a minor New Source Review (NSR) permit issued on July 28, 2006, and a Title V operating permit with an expiration date of November 13, 2006.

COMPLIANCE STATUS

A full compliance evaluation of this facility, including a site visit, was completed on September 24, 2004. Partial compliance evaluations of the facility, including site visits, were conducted on August 22, 2006 and August 29, 2006. In addition, all reports and other data required by permit conditions or regulations, which are submitted to DEQ, are evaluated for compliance. Based on these compliance evaluations, the facility has not been found to be in violation of any state or federal applicable requirements at this time.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity *	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Filament Winding Equipment							
01	S1	Appalachian Plastics, Inc. filament winding machine; constructed 1995	247.5 lb/hr, output	None	None	-----	March 1, 2001
02	S1	Appalachian Plastics, Inc. filament winding machine; constructed 1979	250 lb/hr, output	None	None	-----	March 1, 2001
03	S1	Appalachian Plastics, Inc. filament winding machine; constructed 2006	250 lb/hr, output	None	None	-----	March 1, 2001 (as amended January 20, 2006)
19	S1	Appalachian Plastics, Inc. filament winding machine; constructed 2006	240 lb/hr, output	None	None	-----	July 28, 2006
Pressure Fed Rolling Equipment							
04	S1	Glas-Craft PFR System; linear application; constructed 1997	33.5 lb/hr, output	None	None	-----	March 1, 2001
05	NB1	Glas-Craft PFR System; tank application; constructed 1998	33.5 lb/hr, output	None	None	-----	March 1, 2001
Flow Coater Equipment							
06	NB2	Glas-Craft LPA-11-S/SP-85; constructed 1999	33.5 lb/hr, output	None	None	-----	March 1, 2001
07	NB2	Glas-Craft LPA-11-S/SP-85; constructed 1999	33.5 lb/hr, output	None	None	-----	March 1, 2001

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
ISD Chopper And Spray Coating Equipment							
08	S1	Glas-Craft ISD-H; constructed 1975	20 lb/hr, output	None	None	-----	March 1, 2001
09	S2	Glas-Craft ISD-H; constructed 1975	20 lb/hr, output	None	None	-----	March 1, 2001
10	S2	Glas-Craft ISD-H; constructed 1975	20 lb/hr, output	None	None	-----	March 1, 2001
Gelcoat Spray Equipment							
11	NB2	Binks atomized spray; constructed 1968; unknown model	10 lb/hr, output	None	None	-----	March 1, 2001
Hand Lay Up Operations							
12	-----	Manual resin application	280 lb/hr, output	None	None	-----	March 1, 2001
Impinged Nozzle Chopper Equipment							
13	S2	Glas-Craft, INDY Dispense Gun; 2002	64 lb/hr, output	None	None	-----	March 1, 2001
14	S2	Glas-Craft, INDY Dispense Gun; 2002	64 lb/hr, output	None	None	-----	March 1, 2001
15	S1	Glas-Craft, INDY Dispense Gun; 2006	64 lb/hr, output	None	None	-----	March 1, 2001
16	NB1	Glas-Craft, INDY Dispense Gun; 2006	64 lb/hr, output	None	None	-----	March 1, 2001
17	NB1	Glas-Craft, INDY Dispense Gun; to be installed	64 lb/hr, output	None	None	-----	March 1, 2001
18	NB2	Glas-Craft, INDY Dispense Gun; to be installed	64 lb/hr, output	None	None	-----	March 1, 2001

*The Size/Rated capacity is provided for informational purposes only, and is not an applicable requirement.

EMISSIONS INVENTORY

A copy of the 2005 Emission Statement is attached. Emissions are summarized in the following tables.

2005 Actual Emissions

	2005 Criteria Pollutant Emissions in Tons/Year				
Emission Unit	VOC	CO	SO ₂	PM ₁₀	NO _x
01 - 03	17.14	-----	-----	-----	-----
04 - 18	4.72	-----	-----	-----	-----
Total	21.86	-----	-----	-----	-----

2005 Facility Hazardous Air Pollutant Emissions

Pollutant	2005 Hazardous Air Pollutant Emissions in Tons/Yr
Styrene	19.0
Methyl Methacrylate	2.86

EMISSION UNIT APPLICABLE REQUIREMENTS – Facility-Wide Requirements: Units 01 through 18

Limitations

The following limitations are State BACT requirements from Conditions 2 and 3 of the Minor NSR Permit issued on July 28, 2006:

Condition 2 limits emissions from the operation of filament winding, pressure fed roller, flow coater, impinged nozzle chopping, hand lay-up, spraying and ISD chopping processes, 01 through 19, to the following:

Volatile Organic Compounds 96.09 lb/hr 116.91 tons/yr

Annual emissions will be calculated monthly as the sum of each consecutive 12-month period.

Condition 3 limits visible emissions from the facility's exhaust stack, S1, to 20% opacity except during one six-minute period in any one hour in which visible

emissions shall not exceed 30% opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). This condition applies at all times except during startup, shutdown and malfunction.

As an existing reinforced plastic composites production facility with no centrifugal casting or continuous lamination/casting operations, 9 VAC 5-60-100, Subpart WWWW of Virginia air pollution regulations and the following provisions of 40 CFR Part 63, Subpart WWWW-National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production, apply to the open molding operation:

40 CFR 63.5805(a): Emission limitation for open molding in Table 3 and work practice standards for open molding of large parts in Table 4;

40 CFR 63.5810(a) – (d): Compliance options for existing open molding operations; and

40 CFR 63.5835(a): General requirements for compliance with the emission limitation for open molding in Table 3.

There are no add-on control devices at the facility for HAP emissions from the open molding equipment. Therefore, the emissions capture and control option in 40 CFR 63.5830(a) is not included in the permit.

Monitoring

The monitoring and recordkeeping requirements in Condition 4 of the NSR permit have been modified to meet Part 70 requirements.

VOC emission limits in the current NSR permit are based on resin throughput limits contained in the previous NSR permit for this source. However, resin throughput limitations were not used to limit the source's potential to emit in the current NSR permit because operating and production parameters are not readily limited due to the wide variety of resins and products and due to the unpredictable nature of this type of business. Therefore, emission limits coupled with a requirement to calculate daily emissions are used to restrict potential to emit. The permittee will be required to keep the records necessary for this calculation, including daily quantities and the VOC content of each resin used. Emission limits, in this case, are more easily enforceable than operating or production limits. Maintaining records of hourly and annual VOC emissions from the facility will monitor compliance with the VOC emission limits. Emissions will be calculated using methods and emission factors approved by the DEQ.

There is no monitoring for the visible emission requirement. According to the permittee, operation of the current processes will not result in visible emissions.

9 VAC 5-60-100, Subpart WWWW of Virginia air pollution regulations and the following provisions of 40 CFR Part 63, Subpart WWWW-National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production, apply to the open molding operation:

40 CFR 63.5895(c) and (d): Monitoring and data collection requirements for resin use; and

40 CFR 63.5900(a)(2) and (a)(4): Continuous compliance demonstration requirements.

Recordkeeping

The permittee will maintain records of the following:

The permittee will record weekly and annual hours of operation of the facility. Annual hours of operation will be calculated monthly as the sum of each consecutive 12-month period.

The permittee will maintain Material Safety Data Sheets (MSDS) or other vendor information showing VOC content of each resin used at the facility.

The permittee will record weekly and annual throughput of each resin to each process. Annual throughputs will be calculated monthly as the sum of each consecutive 12-month period.

The permittee will calculate and record hourly and annual emissions of VOC from the facility. Emissions will be calculated using methods and emission factors approved by the DEQ. Hourly emissions will be calculated weekly by dividing total weekly emissions by total weekly hours of operation of the facility. Annual emissions will be calculated monthly as the sum of each consecutive 12-month period.

9 VAC 5-60-100, Subpart WWWW of Virginia air pollution regulations and the following provisions of 40 CFR Part 63, Subpart WWWW-National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production, apply to the open molding operation:

40 CFR 63.5895(c) and (d): Recordkeeping requirements for resin use; and

40 CFR 63.5915 and 5920: Recordkeeping requirements.

Testing

The permit does not require source tests. A table of test methods has been included in the permit if testing is performed. The Department and EPA have authority to require testing

not included in this permit if necessary to determine compliance with an emission limit or standard.

Reporting

9 VAC 5-60-100, Subpart WWW of Virginia air pollution regulations and the following provisions of 40 CFR Part 63, Subpart WWW-National Emission Standards for Hazardous Air Pollutants: Reinforced Plastic Composites Production, apply to the open molding operation:

40 CFR 63.5905 and 5910: Notification and reporting requirements.

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110, that apply to all Federal operating permit sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions, including those caused by upset, within one business day.

Comments on General Conditions

B. Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §2.1-20.01:2 and §10.1-1185 of the *Code of Virginia*, and the “Department of Environmental Quality Agency Policy Statement NO. 3-2001.”

F. Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excess emission reporting within four hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to section 9 VAC 5-20-180 including Title V facilities. Section 9 VAC 5-80-250 is from the Title V regulations. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four daytime business hours of discovery of the malfunction.

U. Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition U and General Condition F. For

further explanation see the comments on General Condition F.

Y. Asbestos Requirements

The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61, subpart M, National Emission Standards for Asbestos.

STATE ONLY APPLICABLE REQUIREMENTS

The following Virginia Administrative Code section has specific requirements only enforceable by the State:

9 VAC 5-40-340, Standard for Odor.

FUTURE APPLICABLE REQUIREMENTS

The open molding processes, 01 through 19, are existing sources subject to the provisions of 40 CFR 63, Subpart WWWW, National Emission Standards for Hazardous Air Pollutants for Reinforced Plastic Composites Production. Subpart WWWW became effective on April 21, 2003. Table 2 of the subpart indicates the compliance date for an existing affected source is April 21, 2006. The Title V permit renewal application indicates an expected compliance date of April 3, 2006; therefore, all applicable requirements in Subpart WWWW have been included in the renewal permit.

INAPPLICABLE REQUIREMENTS

New Source Performance Standard (NSPS) Requirements for Polymeric Coating of Supporting Substrates in 40 CFR Part 60, Subpart VVV, and 9 VAC 5-50-410, are not applicable as indicated by the non-applicability determination memorandum from Michael S. Alushin, Director, Compliance Assessment and Media Programs Division, Office of Compliance, U.S. Environmental Protection Agency, dated March 20, 2001. Differences between the fiberglass reinforced plastic manufacturing processes and the processes described in the Background Information Document (BID) for NSPS Subpart VVV include, but are not limited to the following:

All coated materials discussed in the BID are polymers; the permittee's process utilizes monomeric styrene;

The permittee's processes does not utilize solvents; the styrene monomer is liquid with physical properties sufficient for processing;

There are no flashoff, drying or curing ovens associated with the processes; they are unnecessary due to the fact that no solvents are used that need to be dried and

the styrene monomer is transformed to polystyrene upon heating the liquid in the forming die.

The finished product is a structural component and completely rigid, not capable of being rewound and is totally inflexible as it comes off the production line; and

The fiberglass-reinforcing matrix is not a substrate to be coated or merely impregnated. It is a critical, supporting structure.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation ¹ (9 VAC_)	Pollutant Emitted (5-80-720 B.)	Rated Capacity (5-80-720 C.)
-----	Propane/natural gas-fired space heaters, 3 units	5-80-720 A. 4	NOx, CO	0.26 MMBtu/hr heat input, each
-----	Propane/natural gas-fired space heaters, 6 units	5-80-720 A. 4	NOx, CO	0.25 MMBtu/hr heat input, each

¹The citation criteria for insignificant activities are as follows:

9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application

9 VAC 5-80-720 B - Insignificant due to emission levels

9 VAC 5-80-720 C - Insignificant due to size or production rate

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

A public notice regarding the draft/proposed permit was published in the Bristol Herald Courier newspaper in Bristol, Virginia on September 12, 2007. Copies of the draft permit and public notice were sent to the EPA by electronic mail on September 7, 2007. A copy of the public notice was sent to the affected states, including Kentucky, North Carolina

and Tennessee, by postal mail on September 10, 2007. A copy of the public notice was sent to all persons on the Title V mailing list by postal mail, electronic mail, or facsimile no later than September 12, 2007.

Public comments were accepted from September 12, 2007, through October 12, 2007. No comments were received from the public, affected states or the EPA regarding the draft permit.